THE EFFECT OF HEART RATE VARIABILITY BIOFEEDBACK TRAINING AND AUTOGENIC TRAINING ON PSYCHOLOGICAL PARAMETERS AMONG CRICKETERS

Saanidhya Singh

Registration No. 535

Supervisor: Dr. Megha Sahu, Dept. of Sports Psychology, LNIPE, Gwalior

Co-supervisor: Dr. Poonam Phogat, Gargi College, Delhi University

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Certificate

I hereby declare that the short synopsis **"Design and Development of Model to Enhance the Prediction of Preferred Learning"** being submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy in Computer Applications under faculty of Computer Applications of Manav Rachna International Institute of Research & Studies, Faridabad during the academic year 2021- 2022.

It is a Bonafide record of original work carried out under the supervision of Dr. Parul Gandhi and has not been submitted in full or part to any other university or institute for a degree or diploma. Further, it is certified that the short synopsis is plagiarism-free, and the proof has been submitted.

Saanidhya Singh

13/5/25

Dr. Bharat Verma(HOD)

Dr. Megha Sahu (Guide)

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Chapter I

INTRODUCTION

The global evolution & transitions of human beings, science, technology, & education, etc. over time has made the world even more challenging as it used to be & merely predicts that the future would be even more consuming for humans altogether. The athletes are no different from this, the practices pertaining to sports, games & exercise has been in existence for 3000 years & has only evolved & displayed growth since then, leading to technological development, strategic development, skill development, psychophysiological development, & even various meanings, aspects & dimensions of different sports & games has evolved & developed throughout time. The changes influenced by the development & evolution of sports have an immense amount of direct impact on the performance of the athlete, physical state & various constitutes related to the physicality of the athlete, & psychological constructs of an athlete. All the three factors are very different in nature however, all three of the factors work parallelly & in a combination matrix influencing a positive effect on each other. Development of psychological attributes such as motivation, self-confidence, anxiety, psychological preparation, concentration, goal setting, imagery, & mental toughness facilitates athletes to achieve a high level of performance (Gümüşdağ & İlhan, 2022). Physiological exercises prove to be beneficial to the mental health & mental functioning of an individual having a negative impact on anxiety, depression & negative mood while having a positive impact on the self-esteem & cognitive functions of an individual (Callaghan P, 2004). Both, physiological & psychological constructs when combined

facilitate high level of athletic performance & also provides an underst&ing of various aspects which are associated to high level of performance (Fronso, Robazza, Bortoli & Bertollo, 2017).

There are various therapies, techniques & interventions deployed in sports to maximize performance, minimize negative physical & psychological setbacks leading to negative outcomes, & facilitates self-awareness among athletes across different games & sports. In this study two such interventions are deployed, 1. Heart rate variability training Biofeedback & 2. Autogenic training, to explore the effect on psychological & mental variables such as anxiety, stress, psychological strain, emotions in sports, emotion regulation, & coping skills. HRV & autogenic therapies are closely associated with each other as both interventions feature breathing patterns & the respiratory function of the body, substantial evidence has been found indicating that autogenic therapy has a positive on heart rate variability & facilitates the control of the vagal tone of the heart (Miu, Heilman, & Miclea, 2008). The dependent variables in the current study encompass a combination of emotions that are dominant in the field of sports & exercise, the possible driven effects of the emotions felt or possessed by an athlete (psychological strain, stress, & anxiety) & the degree to which the interventions administered in the study effects techniques to deal with such emotions & the causes of the emotions (coping skills). The heart rate variability biofeedback intervention involves pattern of slow-paced breathing of four to seven breaths per minute (resonant breathing) which aims at maximising the baroreflex, cardiac vagal tone, & respiratory sinus arrythmia (RSA). Respiratory sinus arrythmia is conceptualised as the variations in the heart rate which accompanies the respiratory function. When an individual breathes in oxygen the heart rate increases as

well as the blood pressure after a delay of four to five seconds, the baroreflex is an automated reflex to steady the blood pressure via respiration driven through the vagus nerve to accelerate or deaccelerate respiratory sinus arrythmia. The heart rate variability gives an insight into underst&ing the autonomic nervous system & the balance between sympathetic & parasympathetic nervous system which are sub parts of the autonomic nervous system. The autonomic nervous system controls all the involuntary activities & consists of the sympathetic nervous system & parasympathetic nervous system, the sympathetic nervous system controls the fight & flight response responsible for the arousal state of an individual whereas the parasympathetic nervous system controls the rest & digest response which is responsible for decreasing the level of arousal of an individual. The heart rate variability describes the heart rate oscillations on an electrocardiogram (ECG) between R-R intervals, R-R intervals are the gap between 2 breath oscillations & the higher the R-R intervals the higher the heart rate variability of an individual.

The autogenic therapy intervention involves guided slow-paced breathing which consists of 6 subsets encompassing different areas of the body, each subset contains statements about administering the sensations of heaviness & warmth to different parts of the body. Autogenic therapy is an intervention administered for relaxation & to calm the mental state of athletes & individuals which then influences the physical state of the athlete & cause physiological relaxation as well.

Statement of problem

the study tends to identify the degree of "effect of HRV BFB and autogenic training on anxiety, stress, psychological strain, emotions in sports, emotion regulation & coping skills".

Objectives of the study

- To explore the effect of heart rate variability biofeedback and autogenic training on stress, anxiety, psychological strain, emotions in sports, coping skills and emotion regulation.
- To explore the relationship between stress, anxiety, psychological strain, emotions in sports, coping skills, and emotion regulation among athletes.
- To explore the difference between stress, anxiety, psychological strain, emotions in sports, coping skills, and emotion regulation between study groups.
- To explore the association between autogenic therapy and heart rate variability biofeedback training.

Hypothesis

H_0: There will be no significant positive effect of HRV biofeedback training and autogenic training on stress, anxiety, psychological strain, emotions in sports, coping skills and emotion regulation.

H_1: There will be a significant positive effect of HRV biofeedback training and autogenic training on stress, anxiety, psychological strain, emotions in sports, coping skills and

emotion regulation.

DELIMITATIONS

- Only cricketers have been considered in this research based on their homogeneity of psychophysiological characteristics involved.
- The age range of the targeted athletes is set at 18-30 years old.
- Only State level or higher-level representatives were considered while collecting the sampling.
- Biofeedback apparatus is to be utilised to get an insight into the heart rate variability of the athletes.
- Standardised recorded autogenic training is to be deployed as a training tool.
- Placebo group will be shown motivational videos.

LIMITATIONS

- As HRV is an easy to learn exercise, the subjects might display an exceptional control after a minimum number of trials.
- The inventories are to be filled online under an uncontrolled environment which could result in response bias of the respondents.

Definitions and explanations of terms:

Heart rate variability (HRV): The difference in time between each heartbeat is known as HRV is a simple measurement of the variations of heart beats and the autonomic nervous system (ANS), a basic component of the nervous system, is in charge of this fluctuation.

Autogenic training(AT): Autogenic training is a technique to induce relaxation and calmness in an individual's body through verbal statements consisting of 6 sets that focus on a particular part of the body.

Anxiety: Anxiety may be defined as apprehension, tension, or uneasiness that stems from the anticipation of danger, which may be internal or external. *(Diagnostic and Statistical Manual of Mental Disorders, 1980).*

Stress: Stress can be defined as a state of worry or mental tension caused by a difficult situation. Stress is a natural human response that prompts us to address challenges and threats in our lives. *(World health organisation)*

Psychological Strain: Psychological stress is marked by a spectrum of emotional weariness and a response to traumatic events.

Emotions in sports: emotions and feelings which are dominant in sports and exercise. Such as, anger, anxiety, dejection, excitement, and happiness and emotions and feeling associated to the same.

Emotion regulation: The capacity to exercise control over one's own emotional state is known as emotion management. It could entail actions like evaluating a stressful situation to lessen anger or anxiety, covering up obvious indications of fear or grief, or concentrating on things that make you feel joyful or peaceful.

Coping skills: Coping mechanisms, also known as coping skills, are the deliberate attitudes and actions used to handle stressful situations.

Need & significance of the study:

To see the effect of heart rate variability biofeedback & autogenic training as interventions on anxiety, psychological strain, emotions in sports, emotion regulation, coping skills, & reaction time among athletes. The heart rate variability biofeedback intervention has been used in medical practices to treat diseases which are related to the autonomic nervous system such as asthma, hypertension, anxiety disorders, & neurotic disorders (Chernigovskaya et al., 1990). However, there are limited studies which involve the use of HRV biofeedback in the field of sports & exercise psychology & the existing studies in the field of sports investigate & explore the use, effects & causes of HRV training on physiological constructs. The current study will provide insight into the use & effectiveness of HRV biofeedback & autogenic therapy interventions on psychological constructs such as emotions, feelings, the causes induced by specific feelings & emotions, & the effect of biofeedback on the techniques of management of stress & anxiety.

Chapter II

LITERATURE REVIEW

Maman Paul & Kanupriya Garg (2012) explored "the effect of heart rate variability biofeedback on performance psychology of basketball players". Where the researchers utilized HRV biofeedback to influence physiological responses which further result in increased & improved psychophysiological communications. The study was conducted on 18-28 years old female & male basketball players & concludes that HRV BFB lowers the level of anxiety & influences increased psychophysiological performance.

Maria Katsamanis Karavidas, Paul M Lehrer, Evgeny Vaschillo, Bronya Vaschillo, Humberto Marin, Steven Buyske, Igor Malinovsky, Diane Radvanski & Afton Hassett in 2007 studied the "Preliminary results of an open label study of heart rate variability biofeedback for the treatment of major depression". Major depressive disorder is associated with negative emotions & moods, suicidal tendencies & loss of interest in life & aspects related to life. The study concludes that HRV BFB can be used as a treatment for MDD, increase in HRV results to increase in cardiovagal activity.

Robert P Nolan, Markad V Kamath, John S Floras, Jill Stanley, Clement Pang, Peter Picton & Quincy R Young (2005) researched "Heart rate variability biofeedback as a behavioral neurocardiac intervention to enhance vagal heart rate control". Patients with coronary heart disease experience negative moods, depressive feelings and stress. Cognitive behavioural and HRV BFB training was conducted on the subjects, the results of the study concluded that HRV BFB is a useful tool to add up to the increase in the vagal heart rate regulation.

Gabriell E Prinsloo, H G Laurie Rauch & Wayne E Derman (2014) studied "A brief review and clinical application of heart rate variability biofeedback in sports, exercise, and rehabilitation medicine" to understand the use of HRV BFB in the management of chronic disease and to gather an insight into the relationship between psychological stress, cardiovascular diseases and changes in HRV. The results of the study concluded that HRV decreases when an individual in undergoing stress, HRV can be increased with biofeedback exercises, and HRV BFB training is an important exercise in sports to manage stress and minimise the chances of developing cardiological diseases.

Alexander H Glassman, J Thomas Bigger, Michael Gaffney & Louis T Van Zyl researched upon "Heart rate variability in acute coronary syndrome patients with major depression: influence of sertraline and mood improvement". Individuals suffering from major depressive disorder experience negative moods and emotions, it is observed that patients suffering from the disorder exhibit a decreased heart rate variability, the objective of the research was the find the influence of improvement of mood on HRV. The results of the study concluded that recovering from the symptoms of depression was closely associated with an increased level of HRV.

Martin Siepmann, Volkan Aykac, Jana Unterdörfer, Katja Petrowski & Michael Mueck-Weymann studied "A pilot study on the effects of heart rate variability biofeedback in patients with depression and in healthy subjects". The increased risk of cardiovascular mortality in individuals with depression has been attributed in large part to decreased vagal activity and increased sympathetic arousal. The purpose of the current study was to determine if treating moderate to severe depression using heart rate variability (HRV) biofeedback was feasible. The results concluded that after undergoing biofeedback,

depressed individuals had less anxiety, a lower heart rate, and an increase in heart rate variability. In contrast, neither healthy biofeedback recipients nor unaltered controls showed any alterations. As a result of improvements in HRV, HRV biofeedback seems to be an effective supplement for the treatment of depression.

Gabriel Tan, Tam K Dao, Lorie Farmer, Roy John Sutherland, & Richard Gevirtz researched into "Heart rate variability (HRV) and posttraumatic stress disorder (PTSD): a pilot study". Heart rate variability (HRV) is a gauge of how well the autonomic nervous system is working and represents a person's capacity to respond to stress in an adaptive manner. The study was conducted to ascertain if the HRV is more depressed in PTSD-affected veterans than in PTSD-unaffected veterans. Additionally, the study evaluated the viability, acceptability, and possible effectiveness of using HRV biofeedback as a PTSD therapy. According to the results, using an HRV biofeedback to treat PTSD in veterans is efficient, doable, and acceptable. Veterans with PTSD due to warfare had considerably lower HRV than non-PTSD participants. The results showed that HRV biofeedback significantly raised the HRV while lowering symptoms of PTSD in the veterans who were randomly randomised to undergo either HRV biofeedback with treatment as usual (TAU) or only TAU. However, neither the decrease of symptoms nor the HRV were significantly impacted by the TAU.

Terri L Zucker, Kristin W Samuelson, Frederick Muench, Melanie A Greenberg, & Richard N Gevirtz studied "The effects of respiratory sinus arrhythmia biofeedback on heart rate variability and posttraumatic stress disorder symptoms: a pilot study". According to research, biofeedback for respiratory sinus arrhythmia (RSA) boosts HRV while easing clinical symptoms that are connected to it. In a residential treatment facility

for drug use disorders, participants in this controlled pilot trial that compared RSA biofeedback and progressive muscle relaxation (PMR) as supplementary therapy for PTSD symptoms. The results of the study concluded that there were statistically significant reductions in PTSD and sleeplessness symptoms as well as a statistical tendency towards fewer drug cravings. The lowering of PTSD symptoms was highly correlated with increases in HRV. Overall, these findings offer early evidence that RSA biofeedback can help PTSD sufferers with their physical and mental health.

Sonya Kim, Vance Zemon, Marie M Cavallo, Joseph F Rath, Rollin McCraty, & Frederick W Foley researched in "Heart rate variability biofeedback, executive functioning and chronic brain injury", to find out if people with brain damage can change their heart rate variability (HRV) using biofeedback and, if so, to alter their pattern to increase their capacity to control their emotions and solve problems. Results show a relationship between HRV training and emotion/cognition management. Through biofeedback, people with severe, ongoing brain damage can alter their HRV.

Sherlin, L., Gevirtz, R., Wyckoff, S., & Muench, F. (2009) studied "Effects of respiratory sinus arrhythmia biofeedback versus passive biofeedback control". The purpose of this study was to compare the acute effects of a portable respiratory sinus arrhythmia (RSA) biofeedback device to passive biofeedback control during repeated administration of the Stroop task cognitive stressor in a single brief session. RSA biofeedback appears to offer extra advantages in lowering state anxiety and HR stress reactivity compared to passive relaxation approaches, early studies reveal. Brief relaxation training can reduce state anxiety.

Eunju Seo, & Soukyoung Kim (2019) studied the "Effect of Autogenic Training for Stress Response: A Systematic Review and Meta-Analysis". This study used a systematic review and meta-analysis to assess the impact of autogenic training on stress responses. The review included a total of 21 articles out of 950 papers, and 11 were included for meta-analysis. These investigations demonstrated that autogenic training enhanced the high frequency of heart rate variability while reducing anxiety and sadness. Nurses will be permitted to carry out autogenic training programmes for workers' stress alleviation at the workplace because autogenic training is beneficial for managing stress in adults.

Nasim Kanji, Adrian White, & Edzard Ernst (2006) researched "Autogenic training to reduce anxiety in nursing students: randomized controlled trial". The purpose of the study described in this paper was to examine if autogenic training was successful in lowering anxiety in nursing students. With 93 nursing students aged 19 to 49, a randomised controlled study with three parallel arms was finished in 1998. Eight weekly sessions of autogenic training were given to the treatment group, eight weekly sessions of laughing therapy were given to the attention control group, and there was no intervention given to the time control group. According to the findings, autogenic training at least temporarily reduces stress in nursing students.

Andrei C. Miu, Renata M. Heilman, & Mircea Miclea (2008) researched upon "Reduced heart rate variability and vagal tone in anxiety: Trait versus state, and the effects of autogenic training". The heart rate variability (HRV) of healthy volunteers under two opposing psychophysiological conditions mental tension and relaxation brought on by autogenic training was examined in this study. The individuals were chosen for their severe trait anxiety (TA) scores. The key conclusion was that low R-R intervals and high

frequency power were related to high TA in all situations. Autogenic training enhanced HRV and aided the heart's vagal regulation in contrast to mental stress. On the LF power or LF/HF ratio, TA and the psychophysiological circumstances had no discernible impact. These findings provide credence to the idea that TA, a significant risk factor for anxiety disorders and a predictor of cardiovascular morbidity and death, is linked to autonomic dysfunction.

Roseanne Reed, & Robert G. Meyer (1974) explored "Reduction of Test Anxiety VIA Autogenic Therapy" 18 Ss performed the Wonderlic Personnel Test and the test on anxiety in order to assess the effects of active and passive instructions on Ss who received shortened training with the six exercises from Schultz and Luthe. Analysis of repeated (two) assessments revealed that therapy reduced test anxiety scores slightly more for active students; 78% of students said that high relaxation was attained and performance improved.

Overview of the literature

Most of the research and study in the field of effects of heart rate variability training in sports and exercise is associated to performance appraisal however, there is only a limited amount of research which explores the affects and the facilitation of heart rate variability on psychological constructs in sports. Heart rate variability training has been used in the medical field relating to cardiovascular diseases and neurological field relating to mood disorders, anxiety and stress which are closely related to the variables of the study providing evidence in the practicality of the study. Autogenic therapy and heart rate variability biofeedback training involve similar breathing patterns (resonant breathing)

and studies provide evidence that autogenic training and heart rate variability have a positive significant relationship. Autogenic training is proved to be a useful tool to treat and cure anxiety, stress, and related constructs of psychology. Both HRV BFB and autogenic training can be combined to be used as a tool to explore the effect of the same on the study variables i.e., stress, anxiety, psychological strain, emotions in sports, coping skills and emotion regulation, where psychological strain and emotions lead to conception of anxiety and stress which are characterised as negative in nature, and emotion regulation and coping skills are innate techniques or strategies which facilitate an athlete to function through these negative circumstances and situations.

Chapter III

METHODOLOGY

Selection of participants

The subjects will be selected purposively, a total number of 45 cricketers will be selected for the study and will be divided in 3 groups, (experimental group; control group; placebo group) cricketers who have at least represented their respective states in the last 2 years with their age ranging from 18 to 40 years old. The subjects who score the least on the study variables at the time of pre-test will be considered as the experimental group.

Procedure of data collection

The data will be collected from 45 cricketers by conducting an experiment and utilising heart rate variability biofeedback training and autogenic training to influence psychological domains such as anxiety, stress, psychological strain, emotions in sports, coping mechanisms & emotion regulation using the following scales and questionnaires

Sports anxiety scale-2, Smith et al., (2006)

A 15-item survey called the Sport Anxiety Scale-2 (SAS-2; Smith et al., 2006) measures athletes' competitive trait anxiety before or during competition. Its scale comprises the following components: somatic anxiety, worry, and concentration disruption. On a Likert scale with a range of one (not at all) to four (very much), participants score each statement-related item. A low score indicates a less severe form of that type of competitive anxiety, while a high score indicates a greater likelihood of showing that type

of anxiety. The score for each subscale is determined as the mean of the scores of subscale items, and it ranges from one to four. Somatic: Items 2, 6, 10, 12, 14; Worry: Items 3, 5, 8, 9, 11; Concentration Disruption: Items 1, 4, 7, 13, 15. The higher an individual scores on the subscales the higher the level of anxiety.

Perceived stress scale Cohen et al. (1983)

The Perceived Stress Scale (PSS-10) is a 10-item survey that was first created by Cohen et al. (1983) and is frequently used to measure stress levels in adolescents and adults 12 years of age and older. It assesses how much a person has felt during the last month that life is unexpected, uncontrolled, and overwhelming. The questions inquire about emotions and ideas from the previous month. On a five-point scale ranging from "never" to "very often," respondents are asked in each scenario how frequently they experienced a certain emotion. The following is how the answers are graded:

Never = 0

Nearly never = 1.

sometimes = 2

Very frequently = 3

Frequently = 4

Responses to the four positively stated items (items 4, 5, 7, and 8) must first be inverted (i.e., 0 => 4; 1 => 3; 2 => 2; 3 => 1; 4 => 0), before the overall PSS score can be calculated. The PSS score is then calculated by adding together all of the components. Higher scores represent higher perceived stress levels.

Athlete Psychological Strain Questionnaire, Rice SM, et al. (2019)

A 10-question, quick self-report screening tool for top athletes' mental health is called the Athlete Psychological Strain Questionnaire (APSQ). It evaluates three aspects of mental stress in elite athletes: self-regulation, performance, and external coping. The respondents mark their responses on a 5 point Likert scale ranging from "none of the time" being the lowest response and "all of the time" being the highest. The APSQ provides a Total Score (sum of all 10 items) and three subscale scores, that assess the following domains, Self-regulation difficulties reflected by item number 1-4, Performance concerns reflected by item number 5-8 and Externalised coping item number reflecting 9-10. Moderate range ranges from 15-16, high level of strain is reflected by scores of 17-19 and very high level od psychological strain is characterised by scores of 20 and more.

Sports emotion questionnaire Jones et al. (2005)

A sport-specific tool for measuring pre-competitive mood, the Sport Emotion Questionnaire (SEQ) rates emotions including assess anger, anxiety, dejection, excitement, and happiness, the sub scales consist of a number of emotions and feelings (22 in total) such as Anxiety = (uneasy + tense + nervous + apprehensive + anxious)/5, Dejection = (upset + sad + unhappy + disappointed + dejected)/5, Excitement = (exhilarated + excited + enthusiastic + energetic)/4, Anger = (irritated + furious + annoyed + angry)/4, Happiness = (pleased + joyful + cheerful + happy)/4. The respondents mark their choice of option on a 5-point likert scale ranging from 0 "not at

all" to 4 "extremely". The sum of the attained scores respective to their domains are the diagnostics of the questionnaire.

Emotion Regulation Questionnaire (ERQ), Gross and John (2003)

Emotion Regulation Questionnaire (ERQ). ERQ an inventory of emotional regulation was developed by Gross and John (2003) is a self reporting inventory consisting of 10 items designed to measure an athlete's tendency to regulate their emotions in 2 ways 1. CR and 2. ES. Respondents answer each question on a 7 point likert-type scale ranging from 1(strongly disagree) to 7(strongly agree). Internal consistency of cognitive reappraisal is .89-.90 and of expressive expressive suppression is .76-.80, Cognitive reappraisal scores have shown negative correlation with psychological distress proving construct related validity.

The ERQ consists of 2 domains, namely, 1. Expressive Suppression and 2. Cognitive Reappraisal, both of the subscales of ERQ have a particular number of items assigned to it, Cognitive Reappraisal- Q1, Q3, Q5, Q7, Q8, and Q10, Expressive Suppression- Q2, Q4, Q6, and Q9.

Athletic Coping Skills Inventory (ACSI), Smith et al. (1994)

Athletic Coping Skills Inventory (ACSI) a measure of an athlete's psychological skills of 28 items which are to marked on a 4 point likert scale ranging from 0 "almost never" to 3 "almost always" consists of subscales: coping with adversity

(5,17,21,24) coachability (3*,10*,15,27), concentration (4, 11,16,25), confidence and achievement motivation (2,9,14,26), goal setting and mental preparation (1,8,13,20), peaking under pressure (6,18,22,28), and freedom from worry (7*,12*,19*,23*). (*to be reverse scored). Greater the score in the particular subscale the greater the strength of the same.

Statistical Techniques

On the basis of the objectives of the study, descriptive statistics will be used to calculate the mean and SD of the subjects, multiple correlations will be used to measure the level and nature of the relationship between study variables, Shapiro Wilk' test of normality will be deployed to measure the normality of distribution of data, ANOVA will be used to compare the means of different study groups and pre post-tests to identify significant difference between the three groups and Cohen's D to evaluate the difference post treatment between the experimental and placebo and control groups. The significance of the hypothesis will be tested at the.05 level. All the statistical procedures will be performed on computer software, the Statistical Package for Social Sciences.

Design of the study

The current study possesses an experimental design with pre-test and post test conducted on all three groups, with experimental group getting the treatment (HRV BFB & Autogenic Training) post pre-test, the placebo group will be shown

motivational videos with administration of post and pre-test, and no treatment or exercises given to the control group with administration of pre and post-tests.

The athletes of the experimental group will receive training from continuous 5 days of the week (weekend off) for continuous 8 week with 2 empty week only to be utilised if an athlete is unable to attend the training sessions.

	10 week TRAINING PLAN				
WEEK 1	AT	HRV BFB	AT	HRV BFB	AT
WEEK 2	HRV BFB	AT	HRV BFB	AT	HRV BFB
WEEK 3	AT	HRV BFB	AT	HRV BFB	AT
WEEK 4	HRV BFB	AT	HRV BFB	AT	HRV BFB
WEEK 5	AT	HRV BFB	AT	HRV BFB	AT
WEEK 6	HRV BFB	AT	HRV BFB	AT	HRV BFB
WEEK 7	AT	HRV BFB	AT	HRV BFB	AT
WEEK 8	HRV BFB	AT	HRV BFB	AT	HRV BFB

HRV BFB- heart rate variability training, AT- Autogenic training

Table no. 1. TRAING PROGRAM

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